

## ABSTRACT OF DISCLOSURE

An electromagnetic wave is input to a resonator 14 filled with a dielectric and a gas, and a resonance frequency, an insertion loss and a half-power width in the resonance mode of the electromagnetic wave output from the resonator 14 are measured by a network analyzer 16 in response to the input of the electromagnetic wave and the complex dielectric constant of the dielectric is calculated from the resonance frequency, the insertion loss and the half-power width which are thus measured.

[Selected Drawing]      Fig. 2